

Differences Between County and State Opencut Mining Regulation

Three Conditional Use Permits for Operations that Mine Sand or Gravel have been applied for and approved in Gallatin County under the existing Interim Zoning. The following list includes site-specific reasonable conditions that the County has required that differ from the requirements of the DEQ Opencut Mining Division permitting under the Opencut Mining Act (MCA 82-4) and associated regulations (ARM 17.24.201 through 17.24.225).

Gallatin County Current CUP Requirement:	DEQ Opencut Mining Division Requirement:
<i>General</i>	
1. Compliance with Growth Policies and Plans	Only statement of compliance with zoning
2. Detailed description of Phases and Timelines of phases of mining	Much less detail, considered a suggestion rather than a requirement
3. Detailed Community Impact Assessment, including assessment of impacts to roads and traffic, property value, economic benefit/degradation, fire mitigation, and noise	Does not require or requires much less detail
4. Public noticing of properties within 1 mile and a public hearing	Notice of residence within 1,000 feet; sometimes a public hearing
5. Any deviation from application materials may be considered a violation	Plan of Operations is only a guideline or suggestion
6. Review after 3 years, perhaps subsequent to that as well	Does not
7. Review to ensure that lease of mined ground does not constitute a "subdivision by lease"	Does not
8. Requires applicant show ownership of adequate water rights and for correct beneficial use categories. If 35 gpm exempt well is required, submit evidence of installation and registration to County	Does not
9. Applicant shall record with Clerk and Recorder a waiver of right to protest any future Rural Improvement Districts (RIDs) or Special Improvement districts (SIDs)	Does not

<u>Hours of Operation</u>	
10. Upon notification, operations will cease to accommodate services in adjacent cemetery	Does not
11. Limits the duration and frequency of extended hours of operation	Does not
<u>Environmental Quality</u>	
12. Specified vertical separation between annual high ground water level and lowest level of mining	Does not – depth specified by intended excavation equipment, statement of within / not within groundwater, and considered to be a suggestion rather than a requirement
13. Provision of adequate on-site sanitary facilities for employees, screened from view	Does not
14. Binding Memorandum of Agreement with ditch companies and protection of ditches	Does not
15. All other permits required by State and Federal agencies are obtained, approved and copied to the county	Does not
16. Off-site and on-site groundwater level and groundwater quality monitoring prior to operations to establish a baseline, and during operations to identify potential impacts. Results submitted to the County.	May require monitoring on-site during operations –may not. If required, this monitoring is less frequent and less rigorous than that required by the County and the results do not have to be submitted to the County.
17. Proof of Surface Water Pollution Prevention Plan and Erosion Control Plan submittal and approval from DEQ	Does not
18. Spill Containment and Contingency Plan	Does not
<u>Roadway Improvement and Traffic Safety</u>	
19. Traffic Impact Study	Does not
20. Copy of approved MDT approach permit, if pertinent	Does not
21. Installation of signage meeting MDT or, as pertinent, County standards	Does not

22. Road and intersection improvements per MDT or, as pertinent, County Road direction	Does not
23. Haul route and direction may be stipulated; may prohibit haul trucks from some county roads (with signage as well)	Does not
<u>Noise Suppression</u>	
24. Pre-operations noise monitoring to establish baseline	Does not
25. Routine noise monitoring during active operations, submitted to the County	Does not
26. Mitigation of noise off-site above site-specific specified levels	Does not
27. Prohibits compression brakes use	Does not
28. Best Available Technology for suppression of noise from equipment	Does not
<u>Dust Suppression and Control</u>	
29. Copy of DEQ Air permit submitted to County	Does not
30. Dust abatement to be performed consistently and conscientiously to limit impacts	Does not
31. Loads adequately or properly loaded to prevent materials from escaping onto public roads	Does not
32. Limits storage / stockpile height	Does not
<u>Noxious Weed Management</u>	
33. Irrigation, as required, to ensure seeding is successful and plant growth adequately controls erosion and weed growth	Does not
34. Pre-closure Memorandum of Understanding from Weed District and inspection by Weed Control District	Does not

<u>General Operating Conditions</u>	
35. Lighting contained within the boundaries of the property; only limited security lighting allowed at night	Does not
36. Landscape plan for road frontage, if pertinent	Does not
37. Operator shall enforce safety measures, including preventing overfilled trucks, covering loads, educating truck drivers and monitoring driver performance	Does not
38. Visual screening from adjacent residences, both those that exist before operations and those built subsequent to beginning of operations	Does not
39. Notification and compliance with fire district	Does not
40. Employee parking required to be provided on-site	Does not
41. 24-hour notification of any violations	Does not
42. Notification of the County of any DEQ violation	Does not
43. Conditions run with the land	Does not

Impacts of Opencut Mining:

Public Health and Safety:

Respiratory health –airborne dust, diesel / machinery emissions, organic emissions from asphalt plants
 Disease – mosquito populations in man-made ponds and standing water at mining facilities
 Stress – noise, lights and traffic proven to increase stress and disturb sleep of nearby residents
 Road safety – gravel trucks and equipment



Environmental:

Water resources -- ponds increase evaporative loss of water from the watershed
 Ground water table -- lowering of ground water table due to depression of water table at pit
 Surface water -- siltation and thermal impacts
 Vegetation -- disturbance increases annual, invasive weeds
 Wildlife -- severe disruption of terrestrial wildlife use during operations
 Hazardous materials -- potential spills of fuels, solvents and lubricants
 Erosion -- extreme perturbation of natural landscape



Quality of Life:

Viewshed -- unsightly berms and stockpiles of materials
 Noise --trucks, excavators, sorters, rock crushers, conveyors, back-up alarms
 Dust -- nuisance for neighbors and direct impacts to outdoor activities



Property Values:

Sellability -- limits sellability and liquidity of real property assets
 Market value -- effects neighborhood property competitiveness
 Maintenance -- concerns about future maintenance of pond

Community, Social, Cultural: Changes in neighborhood development, relationships and community life due to heavy industry

- ***Air Quality Impacts***

1. Off-site dust emissions are rarely (if ever) monitored
 - a. dust irritates eyes, nose, throat, respiratory tract
 - b. exacerbates existing conditions (allergies, asthma, CPODs)
 - c. long term exposure to silica dust may cause silicosis
2. Dust plumes from unvegetated areas and stockpiles when wind is >10mph are considered by MDEQ to be "unavoidable" using best available technology, yet wind conditions are not considered when permitting a site
3. Emissions from asphalt plants and diesel engines include organic carcinogens for which exposures are cumulative over a life time. Smells from asphalt plants that are in compliance with air quality regulations still routinely cause headaches, nausea, etc.
4. Cumulative analysis of impacts of multiple gravel pits are not evaluated during permitting



Dust plume extends 1.5 miles in photo; photo taken 4 miles away from pit.

What is needed:

The Opencut Mining Act should require that, if requested by neighbors, there will be:

- air monitoring at the boundaries of the permitted mine / parcel of land and
- that dust be mitigated to avoid impacts to adjacent properties. Monitoring could be limited to the down-wind boundary at any one time.

- **Noise Impacts:**

1. Levels of noise on property adjacent to gravel operations routinely exceed the levels of background noise identified by the us EPA as requisite to protect public health and welfare with an adequate margin of safety
2. Noise levels measured in neighborhoods surrounding operating pits:
 - a. have been correlated to higher levels of stress hormones, increased blood pressure, immune system suppression
 - b. have a detrimental effect on performance, behavior, cognition, communication.
3. Back-up beepers may just be the most annoying, stressful noise known to humanity.



Home located 500 feet from crusher

What is needed:

The Opencut Mining Act should require that, if requested by neighbors, there will be:

- noise monitoring at the boundaries of the permitted mine / parcel of land and that
- mitigation of off-site noise impacts to avoid adverse impacts to adjacent property. Increase in noise to adjacent properties during work hours should be restricted to a maximum 10 decibel increase over pre-operations day-night average noise (baseline determined through pre-mining noise study).

- ***Traffic Impacts***

1. Increased traffic and congestion on local roads and highways
2. Gravel trucks pose a potential danger to children, walkers, joggers, and bicyclists on rural roads without shoulder/berm for refuge from traffic
3. Increased wear and damage to county roads from heavy trucks
4. Many intersections on haul routes are not appropriate for turning gravel trucks.
5. There is no DEQ authority to enforce haul routes.



Flagmen needed for gravel trucks entering US 191, Gallatin Canyon.

What is needed:

- County authority over permitting gravel pits for wear and loading on county roads, and
- county authority to require improvements of haul roads for safety..

- ***Surface Water and Ground Water Impacts***

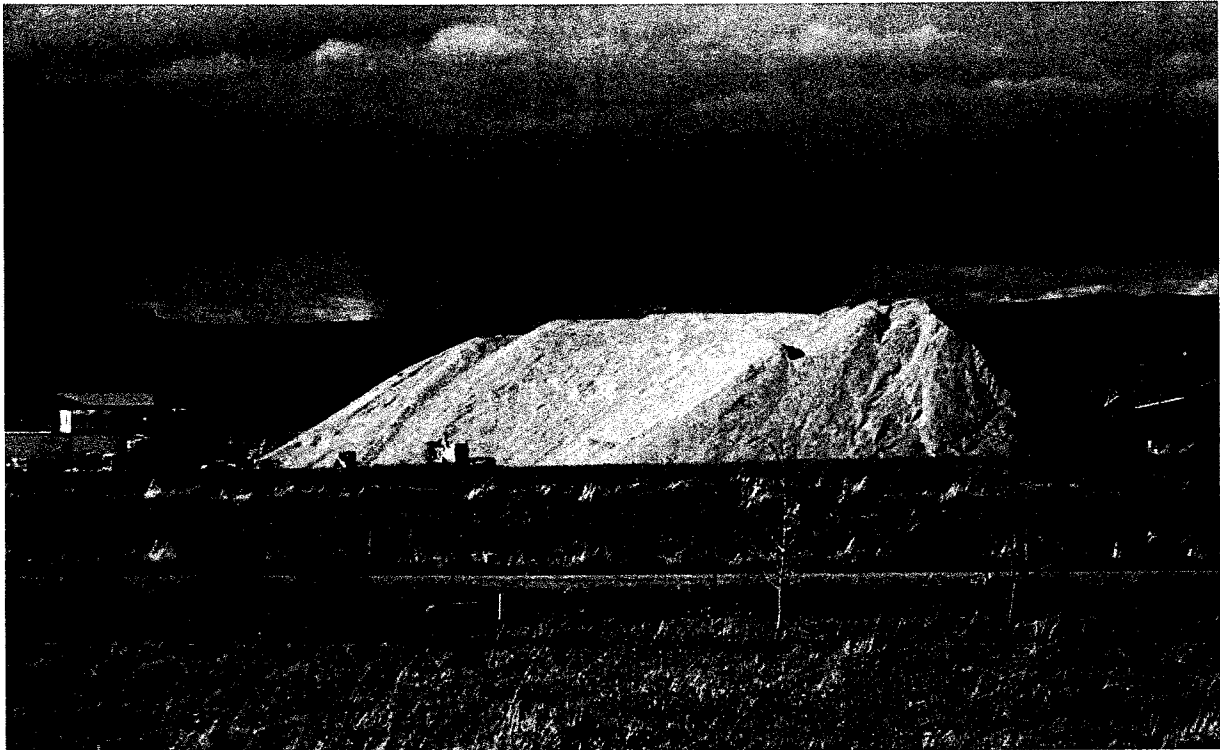
1. In-stream mining can negatively impact the surface water quality, aquatic habitat, and recreational use of streams.
2. Mining in ground water within gravel alluvial aquifers potentially impacts the quality and quantity of available drinking water and the quality, quantity, and physical/chemical character of ground water influx to springs, streams and rivers.
3. Ponds, pumping and other de-watering methods can negatively impact ground water levels, impacting wells, agricultural sub-irrigation, and ground water inflow to rivers and streams.
4. There is no requirement that ponds that are included as reclamation features be adequately maintained after reclamation is in place. Wildlife use of these ponds (geese and ducks, particularly) may impact quality of pond discharge (to groundwater or surface water). Pond creation should be thoroughly evaluated by MFWP.
5. Opencut Permits are issued without proof of ownership and appropriate types of water rights
6. Cumulative effects of impacts to ground and surface water quality and quantities are not assessed.

What is needed:

- Prohibition of in-stream mining except as required for stream resource management by government agencies.
- Prohibition of mining below ground water. If mining below ground water is allowed, there must be a detailed pre-mining hydrogeological investigation and assessment.
- Water quality and quantity must be monitored throughout operations.
- Hydrogeological assessment and monitoring data must be added to public databases and made available to local watershed groups.
- Mines that include water features in their reclamation plans must create a bond for maintenance of the pond after reclamation, which should encourage better pond design.
- Opencut permit applications should require proof of ownership of water rights –both appropriate quantity and types of water rights.

- ***Natural Environment Impacts***

1. Impacts to water, air, and noise as enumerated above degrade the terrestrial and aquatic habitat in the vicinity of the operations.
2. Large areas are unvegetated for the duration of operations
3. Disturbance increases annual invasive weeds (assuming noxious weeds are controlled, per local weed regulations)
4. Extreme perturbation of the natural landscape
5. Loss of vitality and sterility of soils stored in berms
6. Cumulative analysis of impacts of gravel operation permitting to terrestrial and aquatic biota not assessed



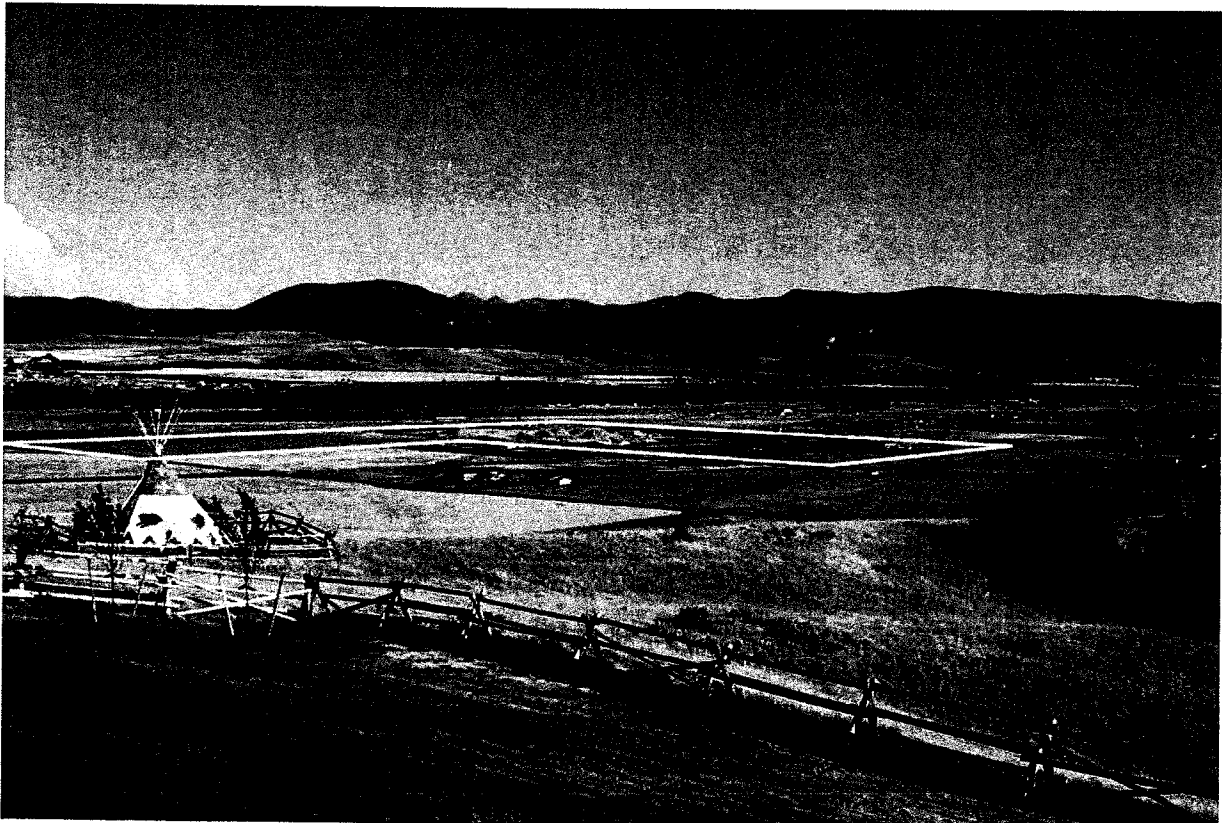
Bald eagle on gravel stockpile.

What is needed:

- Increased mitigation of water, air and noise impacts.
- Limitations on size / duration of impacted areas.
- Rolling reclamation.
- Protection of topsoil micro flora and fauna in stored topsoils.
- Industrial land use limited to appropriate areas.

- ***Community, Social and Cultural Impacts:***

1. Loss of enjoyment and normal use of adjacent private property
2. Impacts to property value (both marketability and total value) if sold during operations
3. Changes in neighborhood development trends, relationships and community life.
4. Impaired viewshed impacts local businesses, homes and development
5. Gravel haul routes on county roads subject these roads and residences adjacent to these roads to a level of traffic that was never intended for many neighborhoods.

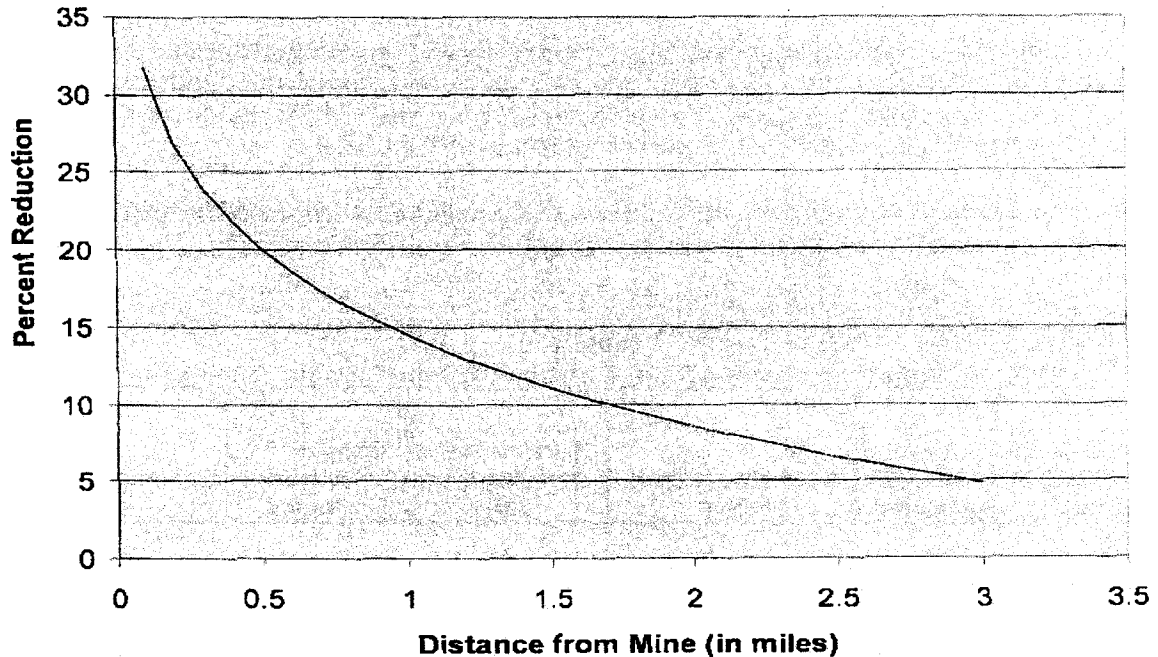


Yellow line shows full proposed extent of pit before any reclamation will take place.

Cary OKs gravel pit payments

CARY – The Village Board approved the first portion of nearly \$1 million in reimbursement funds to Fox Trails residents Tuesday. Trustees voted to approve the first eight payments under a program to provide \$7,500 home improvement reimbursements to 130 homeowners in the Fox Trails subdivision bordering the Meyer Material Co. mining operation. The program was designed to offset the negative impact of the gravel pit on home values in the subdivision.

**Figure 1: Impact of Gravel Pit on Residential
Property Values:
(Percent Reduction by Distance from Mine)**



from D Hite, Auburn U, as cited in G. Erickcek, 2006, "An Assessment of the Economic impact of the Proposed Stoneco Gravel mine Operation on Richland Township"

What is needed:

- County authority over permitting gravel pits and mitigation of adverse impacts.
- Limitations on size / duration of impacted areas.
- Rolling reclamation.
- Scientifically valid research to determine economic impact of opencut mine on neighboring properties and the extent to which mitigation of dust, noise, etc., actually mitigate impacts to neighboring property values

Examples of Opencut Mine “Permit Creep” Gallatin Gateway, MT

Date	Area (acres)	Depth (ft)	Operating Hours ⁽¹⁾	Reclamation
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Nuss

1996	11	25	8-5 Mon-Fri	2001
1998	13.6	35	same	2001
2001	same	same	same	2010
2004	41.2	35	7-6 Mon-Fri; Sat haul	same
pending	87	75	7-6 Mon-Sat	2020

Huttinga⁽³⁾

1996	5	20	not specified	2010
2003	15	30	not specified	2015
2006	25	same	not specified	same
2008	48.6	50 to 75	7-5 M-F ⁽²⁾	2020

Storey⁽³⁾

1999	5	30	16 hours 7 days per week	2003
2002	35.36	20	12 hours 6 days per week	2005
2004	52.2	30	7-5:30 Mon-Fri	2028
2008	119	85	same	same

Fluke

2007	12.9	15	24 hours 9d, 5 off 2007	2010
pending	20.6	15	same	same

Morgan⁽³⁾

2008	53	25	7-7 M-F; 8-5 Sa	2018
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Notes:

1 – each of these pits has reserved the right to operate for extended hours (24/7) if needed for a specific job/contract

2 – Sat 8-5 for maintenance

3—The 2008 permits on these pits are pending DEQ approval/finalization, but have proceeded through the Gallatin County Interim Zoning Conditional Use Permit process

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